

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

WETLAND RESTORATION

(Acre)
Code 657

DEFINITION

The rehabilitation of a drained or degraded wetland where the soils, hydrology, vegetative community, and biological habitat are returned to the natural condition to the extent practicable.

PURPOSE

This practice may be applied for one or more of the following purpose:

- Create or enhance wildlife habitat.
- Provide offsite water quality benefits.
- Restore the hydrology, the hydric soils conditions and hydrophytic plant communities.
- To rehabilitate natural wetlands that were hydrologic and/or vegetation were manipulated in the past.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies only to sites with hydric soils, which formerly were natural wetlands that have been converted. These sites may have completely converted to non-wetland conditions by filling, draining, or other hydrologic changes, or they may still meet wetland criteria but have impaired functions due hydrologic or vegetative modifications.

Upon completion of the restoration the site will meet the current NRCS soil, hydrology, and vegetation criteria of a wetland.

This practice is applicable only if site conditions make it practicable (environmentally and economically) to modify current hydrologic parameters to approximate historic natural hydrologic conditions.

If the presence of hazardous materials or contaminants is suspected, soil samples will be collected and analyzed for their presence as defined by local, state, or federal authorities. Sites containing hazardous materials will not be restored under this standard.

This practice does not apply to:

Sites where a wetland will be restored and maintained with a hydrologic regime and/or plant community different from those, which previously existed before the wetland, was modified. (Refer to the conservation practice standard for Wetland Creation, Code 658).

Sites where a wetland will be created in a location, which historically was not a wetland. (Refer to the conservation practice standard for Wetland Creation, Code 658.)

Sites where a wetland will be constructed to treat significant point and non-point sources of water pollution. (Refer to the conservation practice standard for Constructed Wetland, Code 656.)

CRITERIA

General Criteria

The landowner shall obtain all applicable local, state, and federal permits before implementing restoration measures.

Water rights and availability are assured prior to restoration if required.

Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

The soil, hydrology and vegetative characteristics existing on the site and in the contributing watershed shall be documented before restoration of the site begins. Note relevant features of the contributing landscape such as water and sediment movement patterns, fire regime, and others.

The design will not backwater or discharge water onto neighboring land without an easement or permit.

The potential for occurrence of threatened or endangered species and/or designated critical habitats shall be evaluated for each site proposed for restoration. When planning to restore sites containing these species or habitats, follow normal consultation procedures with the US Fish & Wildlife Service and state/local authorities before initiating restoration practices.

Criteria for Hydric Soil Conditions

Restoration sites will be located on hydric soils. An approximation of the original soil microtopography will be reestablished.

If the hydric soil is covered by fill, sediment, spoil, or other depositional material, the material covering the hydric soil shall be removed only to the surface of the buried (or original) hydric soil.

Where the hydric soil elevation has been lowered due to oxidation and/or compaction, fill material will be added to approximate the original hydric soil elevation, except where water levels will be managed to compensate for the soil loss.

Criteria for Hydrology Restoration

A reliable water supply shall be available that will supply the needs of the restored wetland. The hydrology of the site is defined as the rate, path, and timing of inflow and outflow; duration, frequency, and depth of flooding, ponding or saturation required supporting the desired wetland type.

The hydrology characteristics, including the overall hydrologic variability of the restored wetland, will approximate as closely as possible the conditions that existed before conversion.

NRCS conservation practice standards for Dike, Code 356 and Structure for Water Control, Code 587 will be used as appropriate. Refer to the Engineering Field Handbook, Chapter 13, "Wetland Restoration, Enhancement, and Creation," and Chapter 6, "Structures," for additional design information. Existing drainage systems will be utilized, removed, or modified as needed to achieve the intended purpose. Pumping of groundwater shall not be utilized as a water supply source.

Criteria for Vegetation Restoration

The vegetation shall be restored as closely to the historic native plant community as the restored site conditions will allow. Determination of the historic plant community's species and percent composition shall be based upon reference wetlands (i.e., wetlands in the same watershed of the same type being restored that function at the level desired on the restoration site) and/or other suitable technical references.

On sites where seeds, rootstocks, and other propagules of desired species are already present in the soil or are likely to be transported to the site from nearby sources, natural regeneration shall be the preferred method of establishing the natural plant community. Planting shall be used as appropriate to hasten establishment of desired species or supplement the natural regeneration process.

Planting, seeding, or other types of vegetative establishment will be comprised of native species that occur on the wetland type being restored.

Refer to Tables 1, 2, 3, and 4 for a selected list of common wetlands plants species, which occur in the Caribbean Area.

In soils where seed banks realistically exist, or where natural colonization of selected native species (identified from reference wetlands) will dominate within five years, natural regeneration may be allowed.

Specification of adequate substrate material and site preparation necessary for proper establishment of the selected plant species shall be included in the design.

Where planting and/or seeding is necessary, the density, distribution and diversity of species to be restored shall be based upon the predominant native species present in the reference wetland, or appropriate technical reference. At a minimum, restoration of herbaceous community types will require establishment of at least two species of wetland vegetation per type. For forested or shrub wetland communities, restoration will require establishment of a minimum of three tree/shrub species for each community type.

Herbaceous vegetation may be established by a variety of methods including: mechanical or aerial seeding, top soiling, organic mat placement, wetland sod, vegetative sprigs or transplants, etc., over the entire site or a portion of the site and at densities and depths as appropriate.

Tree (and shrub) planting, planting rates and site preparation will meet the criteria of NRCS conservation practice standard Tree/Shrub Establishment, Code 612. Seed viability will be determined prior to planting.

Long-term (i.e., at least five years) survival of desired species on the restoration site shall typically be a minimum of 80% of herbaceous species and 80% (stem count) of woody species. Long term allowable invasive/exotic plant species coverage shall be limited to < 15% combined area and stem count coverage.

Wetland Buffer - A buffer zone at least 15 feet wide shall be established around the site to protect the wetland. The buffer may consist of an existing, well-vegetated plant community comprised of perennial grasses, forbs, and/or woody species, or a plant community may need to be established either by natural regeneration or by planting.

Selection of plant species to be established in the buffer shall be based on the planned functions of the buffer. Vegetative criteria in the conservation practice standards for Riparian Herbaceous Cover, Code 390, and Riparian Forest Buffer, Code 391, shall be used as appropriate.

For purposes of this standard, the buffer requirement does not apply to the portion of the

site occupied by structural measures such as embankments or surface drain plugs.

Criteria for Wetland Functions

Prior to restoration, a functional assessment (Hydrogeomorphic Approach as outlined in the National Food Security Act Manual, or similar approved method shall be performed on a nearby reference wetland in order to target desired functioning levels for the restoration site.

Restoration goals and objectives shall include natural wetland functions appropriate to the wetland type and the site location as determined by functional assessment, and/or other technical references as appropriate (e.g., Wetlands Reserve Program National Handbook).

Monitoring of restoration success shall occur at least annually during the first five years after establishment of the restoration. Adaptive modification shall be made if necessary to achieve the stated goals of the restoration.

A post-project evaluation will be performed to assess the degree of success of the restoration. Functional assessments shall be performed as part of the monitoring and post-project evaluation to help evaluate success.

CONSIDERATIONS

Consider the effects of restoration on downstream flows or aquifers that would affect other water uses or users.

Consider establishing and maintaining vegetative buffers on adjacent uplands to protect and enhance wetland functions such as water quality enhancement, floodwater storage and wildlife habitat.

Consider restoring sites adjacent or in close proximity to existing wetlands as they may offer increased wetland system complexity and diversity, lessen habitat fragmentation, and help ensure colonization of the site by desirable wetland flora and fauna.

Consider the effect of volumes and rates of runoff, infiltration, evaporation, and transpiration on the water budget of the wetland.

Evaluate the potential for a change in rates of plant growth and transpiration because of changes in the volume of available soil water.

Consider the effects of varying water levels in response to potential climatic events such as extreme wet or dry periods.

Consider changes in salt movement/concentrations in the soil resulting from hydrologic alterations.

The nutrient and pesticide tolerance of the plant species planned should be considered where known nutrient and pesticide contamination potential exists. Remediation of areas contaminated by pesticides will be needed prior to restoring wetlands that will attract wildlife.

Consider long-term groundwater source availability in areas where numerous or large capacity consumptive use wells may lower regional groundwater tables.

PLANS AND SPECIFICATIONS

Specifications for this practice shall be prepared for each site. Specifications shall be recorded using approved specifications sheets, job sheets, narrative statements in the conservation plan, or other documentation. Requirements for the operation and maintenance of the practice shall be incorporated into site specifications.

OPERATION AND MAINTENANCE

The following guidelines shall be followed to insure that this practice functions as intended throughout its expected life. These actions include performance of normal repetitive activities in the application and use of the practice (operation), and repair and upkeep of the practice (maintenance).

Any use of fertilizers, pesticides and other chemicals shall not compromise the functioning of the restored wetland.

Biological control of nuisance and invasive/exotic plant species and pests (e.g., using predator or parasitic species) shall be implemented where available and feasible.

Water control structure levels will be set and timed as appropriate to allow for the establishment of desired hydrologic conditions and/or for management of vegetation for the specific desired ecological communities.

An inspection schedule will be established for water control structures, embankments, berms, etc. to periodically assess for damage.

Allowable sediment accumulation depths will be determined if periodic sediment removal is required for long term viability of the site.

Management activities such as mechanical treatments will be scheduled when and where needed to maintain the vegetative composition and structure of the desired wetland type(s), including control of invasive/exotic and nuisance vegetation.

REFERENCES

NRCS Conservation Practice Standards:

Dike, Code 356
Structure for Water Control, Code 587
Tree/Shrub Establishment, Code 612

NRCS Engineering Field Handbook, Chapters 6, 13.

Guide to Identify Common Wetlands Plants in the Caribbean Area; Puerto Rico and Virgin Islands, 2001

Table 1. Estuarine System Plants

	Scientific Name	Spanish Name	English Name	Indicator
AQUATICS	<i>Ceratophyllum demersum</i>	Candelabro de agua	Common hornwort, Coon's tail	OBL
	<i>Lemna aequinoctialis</i>	Yerba de pato	Lesser duckweed	OBL
	<i>Marsilea polycarpa</i>	Helecho de agua	Water fern	OBL
	<i>Najas spp.</i>		Waterynymph, naiad	OBL
	<i>Ruppia maritima</i>	Yerba de zanjas	Widgeongrass	OBL
	<i>Thalassia testudinum</i>	Yerba tortuga	Turtlegrass	OBL
	<i>Utricularia gibba</i>		Humped bladderwood	OBL
	<i>Wolffiella lingulata</i>	Wolffiella	Tongueshape bogmat	OBL
FERNS AND VINES	<i>Acrostichum aureum</i>	Helecho de rio	Golden leatherfern	OBL
	<i>Acrostichum danaeifolium</i>	Helecho de pantano	Inland leatherfern	OBL
	<i>Rhabdadenia biflora</i>	Enredadera de mangle	Mangrovevine	OBL
	<i>Thelypteris interrupta</i>		Wilddenow's maiden fern	OBL
FORBS AND RUNNERS	<i>Bacopa monnieri</i>	Yerba de culebra	Coastal water-hyssop	OBL
	<i>Batis maritima</i>	Barilla	Saltwort	FACW
	<i>Echinodorus bertroi</i>	Llantén de agua	Creeping burhead	OBL
	<i>Heliotropium curassavicum</i>	Cotorrea de playa	Salt heliotrope	FACW
	<i>Neptunia plena</i>	Desmanto amarillo	Water dead and awake	FACW
	<i>Phyla nodiflora</i>	Yerba de sapo	Common frog-fruit	FACW
	<i>Sagittaria lancifolia</i>	Flecha de agua	Bulltongue arrowhead	OBL
	<i>Sesuvium maritimum</i>	Verdolaga de mar	slender seapurslane	OBL
	<i>Sesuvium portulacastrum</i>	Yerba de vidrio	Shoreline seapurslane	FACW
	<i>Thalia geniculata</i>	Pámpano	Bent alligatorflag	OBL
GRASS & GRASS-LIKE	<i>Cladium mariscus spp jaimacense</i>	Cortadora de ciénega	Jamaica marsh saw-grass	OBL
	<i>Cyperus giganteus</i>	Junco de ciénega	Giant flatsedge	OBL
	<i>Cyperus imbricatus</i>		Shingle flatsedge	OBL
	<i>Cyperus ligularis</i>	Junco de agua	Alabama swamp flatsedge	FAC
	<i>Eleocharis mutata</i>		Angled spikerush	OBL
	<i>Eriochloa polystachya</i>	Malojilla	Caribgrass	FACW+
	<i>Fimbristylis cymosa</i>		Tropical fimbry	FACW+
	<i>Fuirena umbellata</i>	Yefen	yefen	OBL
	<i>Hymenachne amplexicaulis</i>	Trompetilla		OBL
	<i>Leersia hexandra</i>	Arrocillo rosado	Southern cutgrass	OBL
	<i>Panicum aquaticum</i>	Yerba acuatica	Aquatic grass	OBL
	<i>Phragmites australis</i>	Caña de indio	Common reed	OBL
	<i>Scirpus americanus</i>	Junco	Olney's bulrush	OBL
	<i>Scirpus tabernaemontani</i>	Junco	Softstern bulkrush	OBL
	<i>Scleria hirtella</i>		River nutrush	FACW
	<i>Scleria mitis</i>	Cortadora		OBL
	<i>Sporobolus virginicus</i>	Matojo de playa	Seashore dropseed	FACW
	<i>Typha domingensis</i>	Enea	Cattail	OBL

Estuarine System Plants – cont.

SHURB-LIKE, SHRUB AND TREES	<i>Annona glabra</i>	Cayur, Corazón cimarrón	Pond apple	OBL
	<i>Avicennia germinans</i>	Mangle negro	Black mangrove	OBL
	<i>Bontia daphnoides</i>	Manzanilla	White alling	FACW
	<i>Conocarpus erectus</i>	Mangle de botón	Button-mangrove	FACW
	<i>Hibiscus pernabucensis</i>	Emajagua	Sea hibiscus	NI
	<i>Laguncularia racemosa</i>	Mangle blanco	White mangrove	OBL
	<i>Machaerium lunatum</i>	Escambrón		OBL
	<i>Pterocarpus officinalis</i>	Palo de pollo	Bloodwood	OBL
	<i>Rhizophora mangle</i>	Mangle rojo	red mangrove	OBL
	<i>Stahlia monosperma</i>	Cobana negra		OBL
	<i>Thespesia populnea</i>	Emajaguilla	Portia tree	FAC
Estuarine - Tidal wetlands in low wave energy environments where the salinity of water is greater than 0.5 part per thousand (ppt) and is variable due to the evaporation and the mixing of seawater and freshwater. Ex. Mouth of river.				

Table 2. Riverine System Plants

	Scientific Name	Spanish Name	English Name	Indicator
	<i>Azolla caroliniana</i>	Alfombra de agua	Carolina mosquito fern	OBL
	<i>Ceratophyllum demersum</i>	Candelabro de agua	Common hornwort Coon's tail	OBL
	<i>Elodea canadensis</i>	Elodea, Tomillo de agua	Broad water weed Canadian waterweed	OBL
	<i>Lemna aequinoctialis</i>	Yerba de pato	Lesser duckweed	OBL
	<i>Najas spp.</i>		Waternymph, naiad	OBL
	<i>Pistia stratiotes</i>	Lechuga de agua	Water -lettuce	OBL
FERN	<i>Acrostichum danaeifolium</i>	Helecho de pantano	Inland leatherfern	OBL
	<i>Thelypteris interrupta</i>		Willdenow's maiden fern	OBL
FORBS	<i>Colocasia esculenta</i>	Malanga	Dasheen	OBL
	<i>Echinodorus bertroi</i>	Llantén de agua	Creeping burhead	OBL
	<i>Polygonum acuminatum</i>		Tapertip smartweed	OBL
GRASS & GRASS-LIKE	<i>Cyperus articulatus</i>	Junco cimarrón	Jointed flatsedge	OBL
	<i>Eleocharis interstincta</i>	Junco de espiga	Knotted spikerush	OBL
	<i>Gynerium sagittatum</i>	Caña brava	Wildcane	OBL
	<i>Panicum aquaticum</i>	Yerba acuatica	Aquatic grass	OBL
	<i>Paspalum virgatum</i>	Matojo blanco	Talquezeal	FACW-
	<i>Phragmites australis</i>	Caña de indio	Common reed	OBL
	<i>Typha domingensis</i>	Enea	Cattail	OBL
Riverine - water within a channel flowing either permanently or intermittently.				

Table 3. Lacustrine System Plants

	Scientific Name	Spanish Name	English Name	Indicator
AQUATIC	<i>Ceratophyllum demersum</i>	Candelabro de agua	Common hornwort Coon's tail	OBL
	<i>Elodea canadensis</i>	Elodea, Tomillo de agua	Broad water weed Canadian waterweed	OBL
	<i>Lemna aequinoctialis</i>	Yerba de pato	Lesser duckweed	OBL
	<i>Najas spp.</i>		water nymph, naiad	OBL
	<i>Nymphoides indica</i>	Trebol de agua	Water snowflake	OBL
FERN	<i>Osmunda cinnamomea</i>	Helecho acuático	Cinnamon fern	OBL
FORB & RUNNERS	<i>Colocasia esculenta</i>	Malanga	Dasheen	OBL
	<i>Echinodorus bertroi</i>	Llantén de agua	Creeping burhead	OBL
	<i>Neptunia plena</i>	Desmanto amarillo	Water dead and awake	FACW
	<i>Phyla nodiflora</i>	Yerba de sapo	Common frog-fruit	FACW
	<i>Polygonum acuminatum</i>		Tapertip smartweed	OBL
	<i>Polygonum punctatum</i>	Yerba de jicotea	Dotted smartweed	OBL
GRASS & GRASS-LIKE	<i>Eleocharis interstincta</i>	Junco de espiga	Knotted spikerush	OBL
	<i>Panicum aquaticum</i>	Yerba acuática	Aquatic grass	OBL
	<i>Typha domingensis</i>	Enea	Cattail	OBL
SHRUB	<i>Aeschynomene sensitiva</i>	Moriviví bobo	Sensitive joint vetch	OBL
Lacustrine - no tidal and tidal freshwater wetland within an intermittently to permanently flooded lake or reservoir larger than 20 acres and less than 2 meters deep (6.6 feet).				

Source: Guide to Identify Common Wetland Plants in the Caribbean Area: Puerto Rico and Virgin Islands, 2001.

Table 4. Palustrine System

	Scientific Name	Spanish Name	English Name	Indicator
Aquatic	<i>Azolla caroliniana</i>	Alfombra de agua	Carolina mosquito fern	OBL
	<i>Elodea canadensis</i>	Elodea, Tomillo de agua	Broad water weed Canadian waterweed	OBL
	<i>Lemna aequinoctialis</i>	Yerba de pato	Lesser duckweed	OBL
	<i>Marsilea polycarpa</i>	Helecho de agua	Water fern	OBL
	<i>Utricularia gibba</i>		Humped bladderwood	OBL
Ferns & Vines	<i>Blechnum serrulatum</i>		Toothed midsorus fern	OBL
Forbs & Runners	<i>Bacopa monnieri</i>	Yerba de culebra	Coastal water-hyssop	OBL
	<i>Canna glauca</i>	Maraca de pantano	Lousiana canna	OBL
	<i>Centella erecta</i>	Yerba de clavo	Erect centella	FACW
	<i>Colocasia esculenta</i>	Malanga	Dasheen	OBL
	<i>Dieffenbachia seguine</i>	Rabano cimarón	Dumbcane	OBL
	<i>Drosera capillaris</i>		Pink sundew	OBL
	<i>Echinodorus bertroi</i>	Llantén de agua	Creeping burhead	OBL
	<i>Hydrocotyle umbellata</i>	Ombligo de venus	Many flower	OBL
	<i>Mitreola petiolata</i>		Lax hornpod	OBL
	<i>Phyla nodiflora</i>	Yerba de sapo	Common frog-fruit	FACW
	<i>Polygonum acuminatum</i>		Tapertip smartweed	OBL
	<i>Polygonum punctatum</i>	Yerba de jicotea	Dotted smartweed	OBL
	<i>Rhexia cubensis</i>	Camasey mariana	Meadow-beauty	FACW+
	<i>Sagittaria intermedia</i>	Sagitaria	Intermediate arrowhead	OBL
	<i>Sagittaria lancifolia</i>	Flecha de agua	Bulltongue arrowhead	OBL
	<i>Sauvagesia erecta</i>	Yerba de San Martin	St. Martin grass	FACW+
Grass & Grass-like	<i>Arundo donax</i>	Caña gigante	Giantreed	FAC
	<i>Brachiaria mutica</i>	Malojillo	Paragrass	FACW-
	<i>Coix lacryma-jobi</i>	Camándula	Job's tears	OBL
	<i>Cyperus articulatus</i>	Junco cimarrón	Jointed flatsedge	OBL
	<i>Cyperus giganteus</i>	Junco de ciénega	Giant flatsedge	OBL
	<i>Cyperus imbricatus</i>		Shingle flatsedge	OBL
	<i>Cyperus ligularis</i>	Junco de agua	Alabama swamp flatsedge	FAC
	<i>Cyperus odoratus</i>		Fragrant flatsedge	FACW+
	<i>Cyperus polystachyos</i>		Manyspike flatsedge	FACW
	<i>Echinochloa colonum</i>	Arrocillo	Jungle rice	FACW
	<i>Echinochloa crus-galli</i>	Yerba de corral	Barnyardgrass	OBL
	<i>Echinochloa crus-pavonis</i>	Arrocillo	Gulf cockspur grass	OBL
	<i>Echinochloa polystachya</i>	Yerba de río	Creeping rivergrass	OBL
	<i>Eleocharis cellulosa</i>	Junco fino	Gulf coast spikerush	OBL
	<i>Eleocharis interstincta</i>	Junco de espiga	Knotted spikerush	OBL
	<i>Eleocharis mutata</i>		Angled spikerush	OBL
	<i>Eleocharis rostellata</i>		Beaked spikerush	OBL
	<i>Eriochloa polystachya</i>	Malojilla	Caribgrass	FACW+
	<i>Fuirena umbellata</i>	Yefen	Yefen	OBL
	<i>Gynerium sagittatum</i>	Caña brava	Wildcane	OBL
	<i>Hymenachne amplexicaulis</i>	Trompetilla		OBL
	<i>Lagenocarpus guianensis</i>		Bur sedge	OBL

Palustrine System Plants – cont.

	Scientific Name	Spanish Name	English Name	Indicator
Grass & Grass-like	<i>Leptochloa mucronata</i>	Yerba de hilo	Mucronate sprangletop	FACW
	<i>Panicum aquaticum</i>	Yerba acuática	Aquatic grass	OBL
	<i>Panicum glutinosum</i>	Yerba pegajosa	Sticky panicgrass	FACW
	<i>Paspalum geminatum</i>	Yerba de pantano	Water panicum	OBL
	<i>Paspalum millegrana</i>	Cortadora		FACW
	<i>Paspalum vaginatum</i>		Seashore paspalum	FACW
	<i>Paspalum virgatum</i>	Matojo blanco	Talquezeal	FACW-
	<i>Phragmites australis</i>	Caña de indio	Common reed	OBL
	<i>Rhynchospora fascicularis</i>		Fascicled beaksedge	FACW
	<i>Rhynchospora gigantea</i>	Junco gigante	Giant beaksedge	OBL
	<i>Rhynchospora holoschoenoides</i>		Fly beaksedge	OBL
	<i>Scleria mitis</i>	Cortadora		OBL
	<i>Sporobolus virginicus</i>	Matojo de playa	Seashore dropseed	FACW
	<i>Typha domingensis</i>	Enea	Cattail	OBL
SHRUB & TREE	<i>Begonia decandra</i>	Begonia	Native begonia	FACW-
	<i>Cyrilla racemiflora</i>	Palo colorado	Swamp titi	FACW+
	<i>Didymopanax gleasonii</i>	Yuquilla		OBL
	<i>Hibiscus trilobus</i>	Hibisco	Treelobe rosemallow	OBL
	<i>Hypericum hypercoides</i>	Cruz de San Andrés	St. Andrew,s cross	FACW
	<i>Ludwigia octovalvis</i>	Yerba de canga	Mexican primrosewillow	OBL
	<i>Manilkara bidentata</i>	Ausubo	Bulletwood	FAC+
	<i>Myrica cerifera</i>	Arrayán	Dwarf bayberry	FACW
	<i>Prestoea montana</i>	Palma de sierra	Sierra palm	FACW
	<i>Pterocarpus officinalis</i>	Palo de pollo	Bloodwood	OBL
	<i>Sesbania sericea</i>	Papagayo	Silky sesbania	FACW
	<i>Stahlia monosperma</i>	Cobana negra		OBL
Palustrine - no tidal and tidal freshwater wetland within an intermittently to permanently flooded open water bodies of less than 20 acres and less than 2 meters deep (6.6 feet) Ex. <i>Pterocarpus</i> forest.				